

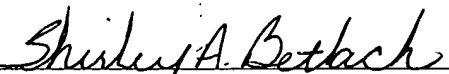


PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Richard B. North; Confirmation No. 5724  
Jeffrey M. Sieracki;  
David D. Brigham  
Serial No.: 10/696,501  
Filed: October 29, 2003 Customer No.: 28863  
Examiner: Unknown  
Group Art Unit: 3764 Docket No.: 1023-223US01  
Title: IMPLANTABLE NEUROSTIMULATOR PROGRAMMING WITH  
BATTERY LONGEVITY INDICATION

CERTIFICATE UNDER 37 CFR 1.8: I hereby certify that this correspondence is being deposited with the United States Post Service, as First Class Mail, in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450 on April 8, 2004.

By:   
Name: Shirley A. Betlach

INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents  
Alexandria, VA 22313-1450

Dear Sir:

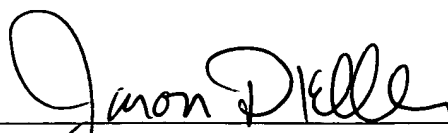
Applicant submits the references listed on the attached form PTO-1449. This statement is being filed, to the best of Applicant's knowledge, before the receipt of a first Office Action on the merits.

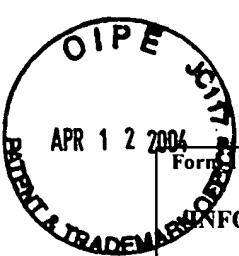
Applicants have enclosed a copy of each article cited and each foreign document cited. Copies of the U.S. patents are not enclosed as this application was filed after June 30, 2003.

Respectfully submitted,

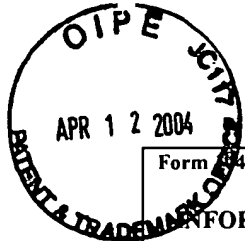
Date: 4-8-04

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By: Jason D. Kelly  
Reg. No. 54,213



<b>Form 1449*</b> <b>INFORMATION DISCLOSURE STATEMENT</b> <b>IN AN APPLICATION</b> (Use several sheets if necessary)		Docket Number: 1023-223US01		Application Number: 10/696,501	
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		Filing Date: October 29, 2003		Group Art Unit: Unknown	
		Examiner Name: Unknown			
<b>U.S. PATENT DOCUMENTS</b>					
<b>Examiner Initial</b>	<b>Document Number</b>	<b>Issue/Document Publication Date</b>	<b>Name</b>	<b>Filing Date If Appropriate</b>	
	4,026,305	05/31/77	Brownlee et al.		
	4,041,955	08/16/77	Kelly et al.		
	4,071,032	01/31/78	Schulman		
	4,082,097	04/04/78	Mann et al.		
	4,142,533	03/06/79	Brownlee et al.		
	4,313,079	01/26/82	Lee		
	4,373,527	02/15/83	Fischell		
	4,390,020	06/28/83	Herpers		
	4,448,197	05/15/84	Nappholz et al.		
	4,542,532	09/17/85	McQuilkin		
	4,550,370	10/29/85	Baker		
	4,556,061	12/03/85	Barreras et al.		
	5,080,096	01/14/92	Hooper et al.		
	5,107,833	04/28/92	Barsness		
<b>FOREIGN PATENT DOCUMENTS</b>					
<b>Examiner Initial</b>	<b>Document Number</b>	<b>Publication Date</b>	<b>Country</b>	<b>Translation</b>	
				<b>Yes</b>	<b>No</b>
	WO 91/10471	07/25/91	PCT		
	WO 96/20754	07/11/96	PCT		
	WO 00/24459	05/04/00	PCT		
<b>OTHER DOCUMENTS (Including Authors, Title of Item, Page(s), Vol/Issue No., Publisher, Place of Publication)</b>					
	Fowler, K.R., "Neurological Stimulation System", Proceedings AAMI 21st Annual Meeting, Apr. 12-16, p. 27, 1986.				
	Fowler, K. R., North, R.B.: "Patient-interactive PC interface to implanted, multichannel stimulators," Proceedings of 39th Annual Conference on Engineering in Medicine and Biology, p. 380, 1986.				
	North, R.B., Fowler, K.R., "Computer-controlled, patient-interactive, multichannel, implanted neurological stimulators," Applied Neurophysiology, 50:39-41, 1987.				
<b>EXAMINER</b>			<b>Date Considered</b>		
<small>*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.</small>					



<b>Form 609*</b> <b>INFORMATION DISCLOSURE STATEMENT</b> <b>IN AN APPLICATION</b> (Use several sheets if necessary)	<b>Docket Number:</b> 1023-223US01	<b>Application Number:</b> 10/696,501
	<b>Applicant:</b> Richard B. North; Jeffrey M. Sieracki; David D. Brigham	
	<b>Filing Date:</b> October 29, 2003	<b>Group Art Unit:</b> Unknown
	<b>Examiner Name:</b> Unknown	

**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Issue/Document Publication Date	Name	Filing Date If Appropriate
	5,117,825	06/02/92	Grevious	
	5,127,404	07/07/92	Wyborny et al.	
	5,168,871	12/08/92	Grevious	
	5,292,343	03/08/94	Blanchette et al.	
	5,314,450	05/24/94	Thompson	
	5,324,315	06/28/94	Grevious	
	5,344,431	09/06/94	Merritt et al.	
	5,350,411	09/27/94	Ryan et al.	
	5,354,319	10/11/94	Wyborny et al.	
	5,369,364	11/29/94	Renirie et al.	
	5,370,668	12/06/94	Shelton et al.	
	5,383,909	01/24/95	Keimel	

**FOREIGN PATENT DOCUMENTS**

Examiner Initial	Document Number	Publication Date	Country	Translation	
				Yes	No
	WO 01/08749	02/08/01	PCT		
	WO 02/49718	06/27/02	PCT		
	WO 02/074368	09/26/02	PCT		

**OTHER DOCUMENTS (Including Authors, Title of Item, Page(s), Vol/Issue No., Publisher, Place of Publication)**

	North, R.B., Nigrin, D.J., Szymanski, R.E., Fowler, K.R., "Computer-controlled, multichannel, implanted neurological stimulation system: Clinical assessment," Pain (Suppl.), 5:S83, 1990.
	Fowler, K.R., North, R.B., "Computer-optimized neurological stimulation," Proc. Ann. Internat. Conf. IEEE Engineering Medicine and Biology Soc., 13:1692-1693, 1991.
	Fowler, K.R., North, R.B., "Computer-optimized neurostimulation," APL Technical Digest, 12:192-197, 1991.
	North, R.B., et al., "Spinal cord stimulation for chronic intractable pain: superiority of 'multi-channel' devices," Pain, V44, pp. 119-130, 1991.

**EXAMINER****Date Considered**

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**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Issue/Document Publication Date	Name	Filing Date If Appropriate
	5,391,193	02/21/95	Thompson	
	5,402,070	03/38/95	Shelton et al.	
	5,402,794	04/04/95	Wahlstrand et al.	
	5,458,624	10/17/95	Renirie et al.	
	5,591,217	01/07/97	Barreras	
	5,620,474	04/15/97	Koopman	
	5,693,076	12/02/97	Kaemmerer	
	5,741,307	04/21/98	Kroll	
	5,744,931	04/28/98	Arai et al.	
	5,752,976	05/19/98	Duffin et al.	
	5,766,232	06/16/98	Grevious et al.	
	5,769,873	06/23/98	Zadeh	
	5,769,877	06/23/98	Barreras, Sr.	

**FOREIGN PATENT DOCUMENTS**

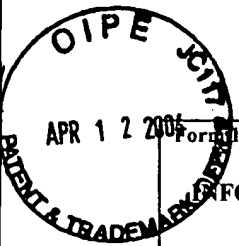
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**OTHER DOCUMENTS (Including Authors, Title of Item, Page(s), Vol/Issue No., Publisher, Place of Publication)**

	North, R.B., Fowler, K.R., "Computer-controlled, patient-interactive neurological stimulation system," (Abstract) Acta Neurochirurgica, 117:90, 1992.
	North, R.B., Fowler, K.R., Nigrin, D.A., Szymanski, R.E., "Patient interactive, computer-controlled neurological stimulation system: Clinical efficacy in spinal cord stimulator adjustment," Journal of Neurosurgery, 76:967-972, 1992.
	North, R.B., Fowler, K.R., Nigrin, D.A., Szymanski, R.E., Piantadosi, S., "Automated 'pain drawing' analysis by computer-controlled, patient-interactive neurological stimulation system," Pain, 50:51-57, 1992.
	North, R.B., "Spinal Cord Stimulation for Chronic Intractable Pain," Advances in Neurology, vol. 63, pp. 289-301, 1993.

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**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Issue/Document Publication Date	Name	Filing Date If Appropriate
	5,807,397	09/15/98	Barreras	
	5,861,019	01/19/99	Sun et al.	
	5,904,708	05/18/99	Goedeke	
	5,938,690	08/17/99	Law et al.	
	6,016,448	01/18/00	Busacker et al.	
	6,108,579	08/22/00	Snell et al.	
	6,148,235	11/14/00	Kuiper	
	6,154,675	11/28/00	Juran et al.	
	6,166,518	12/26/00	Echarri et al.	
	6,167,309	12/26/00	Lyden	
	6,185,461	02/06/01	Er	
	6,308,102	10/23/01	Sieracki et al.	
	6,400,988	06/04/02	Gurewitsch	

**FOREIGN PATENT DOCUMENTS**

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				Yes	No

**OTHER DOCUMENTS (Including Authors, Title of Item, Page(s), Vol/Issue No., Publisher, Place of Publication)**

	North, R.B., "The Role of Spinal Cord Stimulation in Contemporary Pain Management," APS Journal, vol. 2, no. 2, pp. 91-99, 1993.
	North, R. B., Kidd, D. H., Zahurak, M., James, C. S., Long, D. M., "Spinal cord stimulation for chronic, intractable pain: Experience over two decades," Neurosurgery, 32:384-395, 1993.
	North, R.B., Fowler, K.R., "Patient-interactive, microprocessor-controlled neurological stimulation system" (abstract), Stereotactic and Functional Neurosurgery, 62:309-315, 1994.
	North, R. B., Levy, R. M., "Consensus conference on the neurosurgical management of pain," Neurosurgery, 34:756-761, 1994.

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**U.S. PATENT DOCUMENTS**

Examiner Initial	Document Number	Issue/Document Publication Date	Name	Filing Date If Appropriate
	2002/0161328	10/31/02	Rogers	
	6,490,484	12/03/02	Dooley et al.	
	2002/0065366	04/03/03	Merritt et al.	
	6,584,355	06/24/03	Stessman	

**FOREIGN PATENT DOCUMENTS**

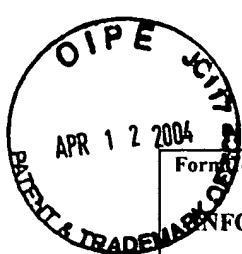
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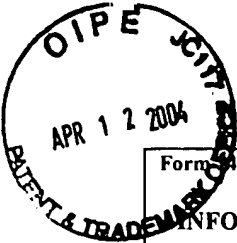
	North, R. B., Kidd, D. H., Lee, M. S., Piantadosi, S., "A prospective, randomized study of spinal cord stimulation versus reoperation for the failed back surgery syndrom," Stereotactic and Functional Neurosurgery, 62:267-272, 1994.
	North, R.B., et al., "Spinal Cord Stimulation For Chronic Pain," Neurosurgery Clinics of North America, vol. 6, no. 1, pp. 145-155, Jan. 1995.
	North, R.B., Cutchis, P., "Spinal cord stimulation for chronic intractable pain," Spinal Cord Stimulation II, pp. 49-63, Darmstadt, Steinkopff, 1995.
	North, R.B., McNamee, P., Wu, L., Piantadosi, S., "Artificial neural networks: Application to electrical stimulation of the human nervous system," (abstract) Stereotactic and Functional Neurosurgery, 65:161, 1995.
	North, R. B., Kidd, D. H., Wimberly, R. L., Edwin, D., "Prognostic value of psychological testing in spinal cord stimulation patients: A prospective study," Neurosurgery, 39:301-311, 1996.
	North, R. B., Kidd, D. H., Zahurak, M., Piantadosi, S., "Specificity of diagnostic nerve blocks: A prospective, randomized study of sciatica due to lumbosacral spine disease," Pain, 65:77-85, 1996.

<b>EXAMINER</b>	<b>Date Considered</b>
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				<b>Yes</b>	<b>No</b>
<b>OTHER DOCUMENTS (Including Authors, Title of Item, Page(s), Vol/Issue No., Publisher, Place of Publication)</b>					
	North, R.B., McNamee, P., Wu, L., Piantadosi, S., "Artificial neural networks: Application to electrical stimulation of the human nervous system," Neurosurgical Focus, 2(1:1):1-5, 1997.				
	Alo, K. M. et al., "Computer Assisted and Patient Interactive Programming of Dual Octrode Spinal Cord Stimulation in the Treatment of Chronic Pain," Neuromodulation, vol. 1, No. 1, pp. 30-45, 1998.				
	North, R.B., Sieracki, J.N., Fowler, K.R., Alvarez, B., Cutchis, P.N., "Patient-interactive, microprocessor-controlled neurological stimulation system," Neuromodulation, 1(4):185-193, 1998.				
	North, R. B., Calkins, S. K., Campbell, D. S., Sieracki, J. M., Piantadosi, S. A., Daly, M. J., Dey, P. B., Barolat, G., "Automated, patient-interactive spinal cord stimulator adjustment: A randomized, controlled trial," Neurosurgery 52:572-580, 2003.				
	Khalessi, A. A., Taylor, R. S., Brigham, D. D., North, R. B., "Automated, patient-interactive spinal cord stimulator adjustment: A cost-minimization analysis," Neurosurgery, 53:501-502, 2003.				
	U.S. Patent Application Serial Number 10/696,781, entitled "Neurostimulation Therapy Manipulation", filed October 29, 2003, Richard B. North, Jeffrey M. Sieracki.				
	U.S. Patent Application Serial Number 10/696,494, entitled "Distributed System for Neurostimulation Therapy Programming", filed October 29, 2003, Richard B. North, Kim R. Fowler, Jeffrey M. Sieracki.				
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**OTHER DOCUMENTS (Including Authors, Title of Item, Page(s), Vol/Issue No., Publisher, Place of Publication)**

	U.S. Patent Application Serial Number 10/696,725, entitled "Failsafe Programming of Implantable Medical Devices", filed October 29, 2003, Richard B. North, Jeffrey M. Sieracki.
	U.S. Patent Application Serial Number 10/696,491, entitled "Body Region Indication", filed October 29, 2003, Richard B. North, Jeffrey M. Sieracki.
	U.S. Patent Application Serial Number 10/696,778, entitled "Applying Filter Information to Identify Combinations of Electrodes", filed October 29, 2003, Richard B. North, Jeffrey M. Sieracki.

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(Also form PTO-1449)